

FIG. 1

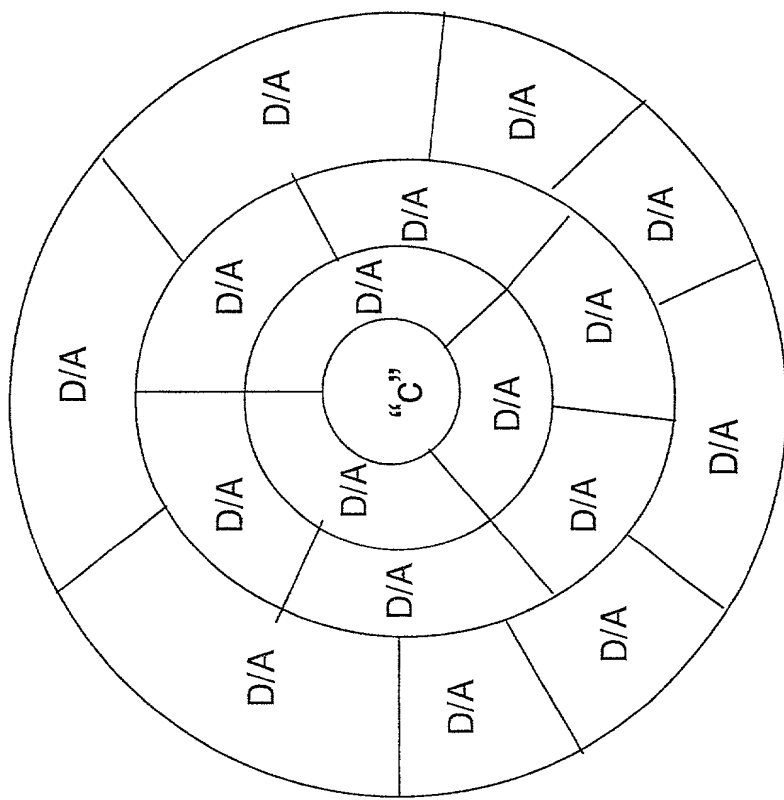


FIG. 2

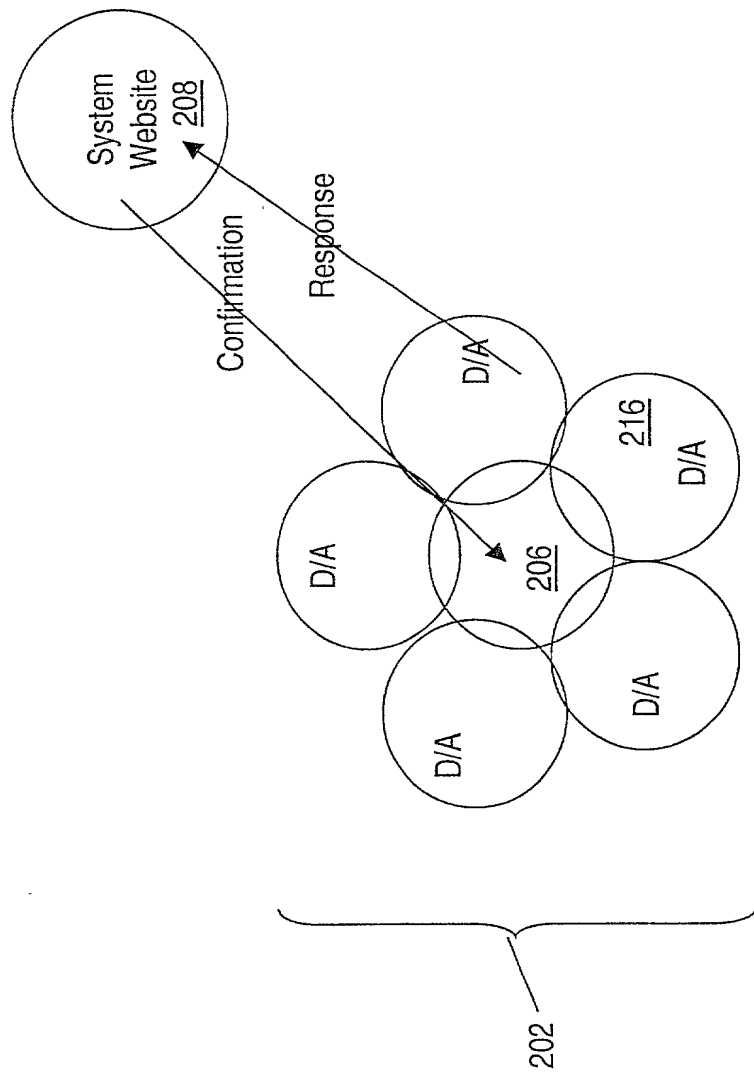


FIG. 3

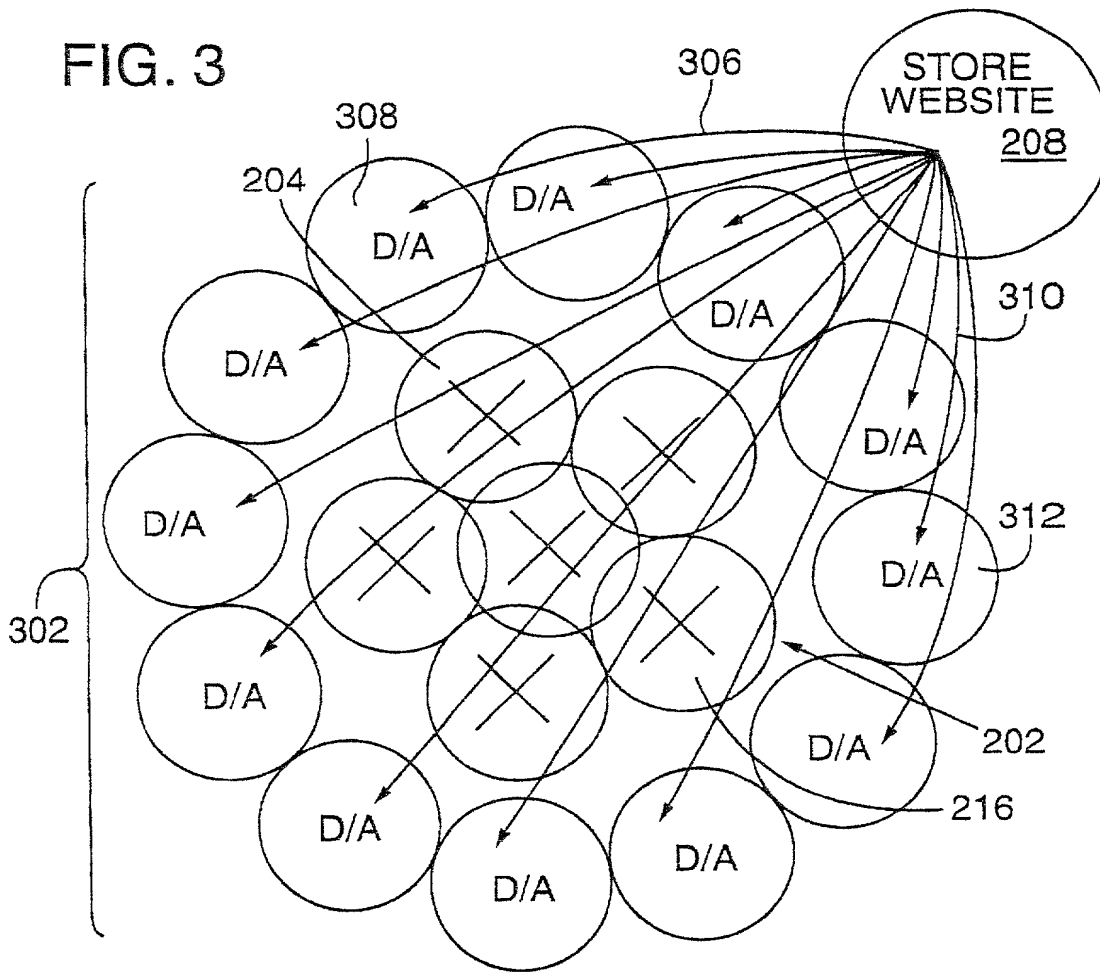


FIG. 4

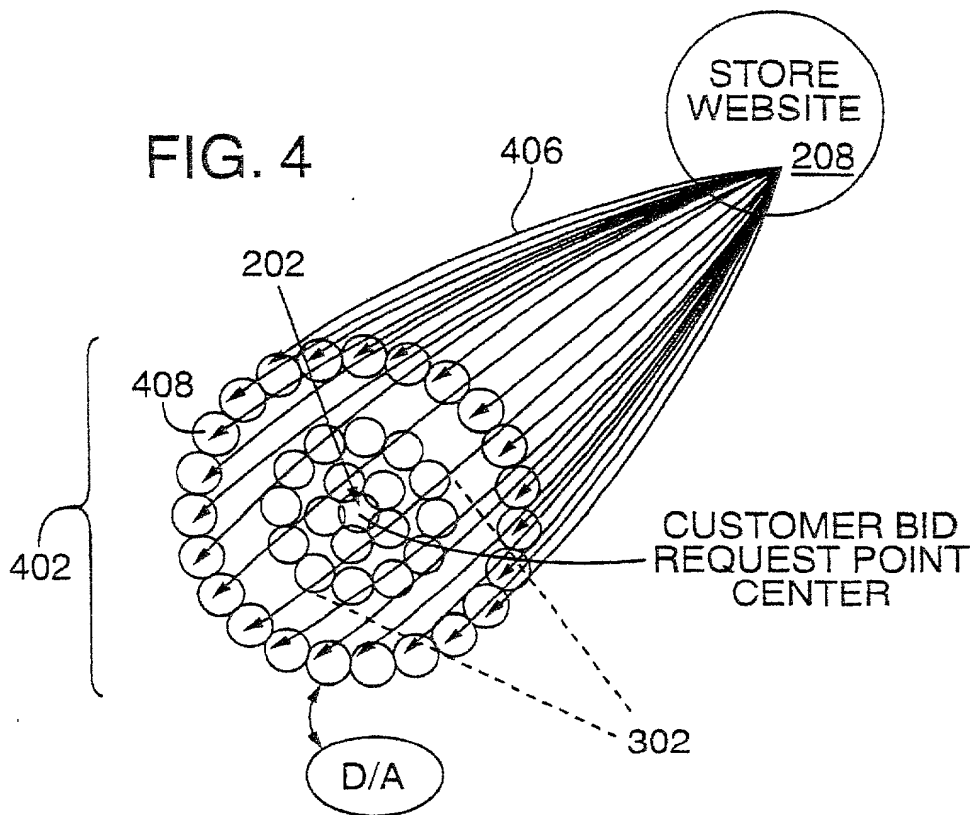


FIG. 5

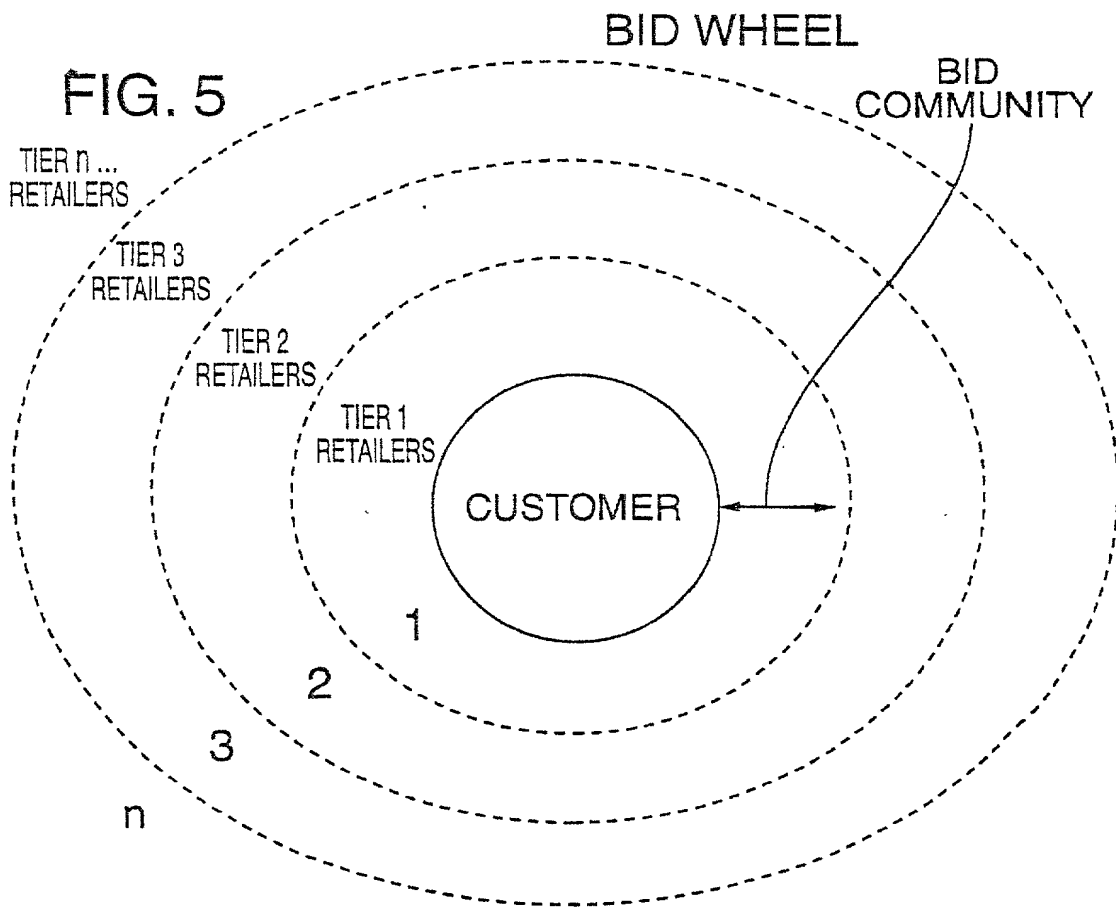
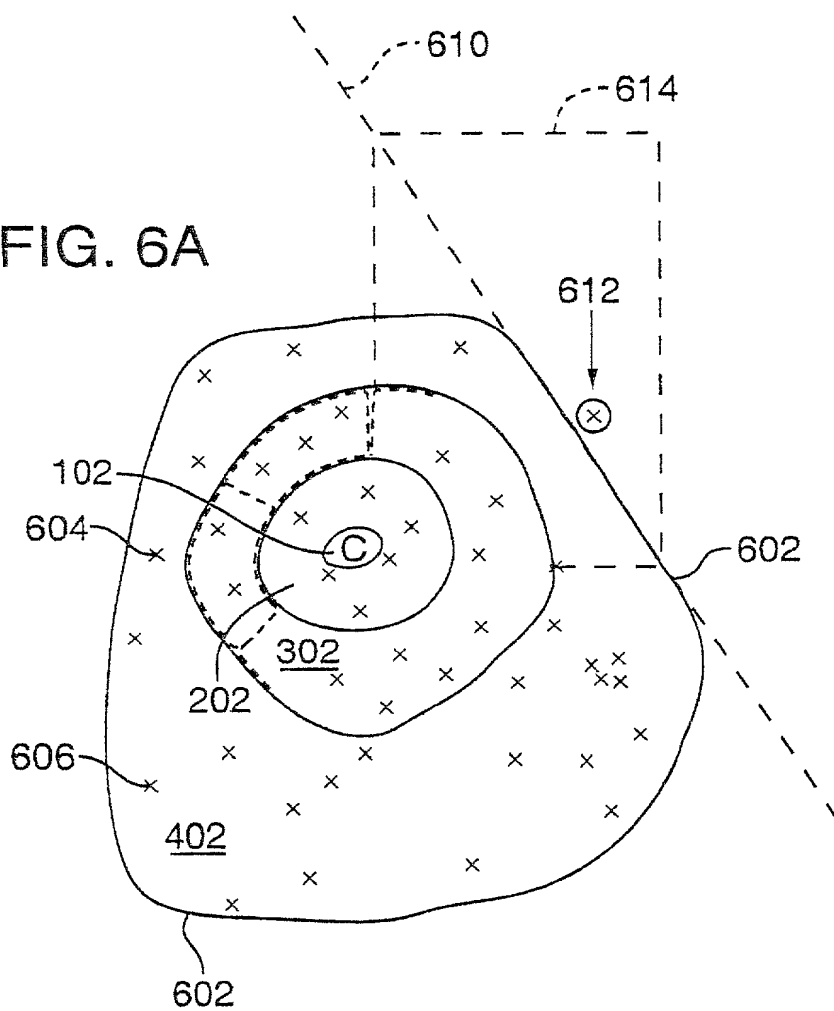


FIG. 6A



|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

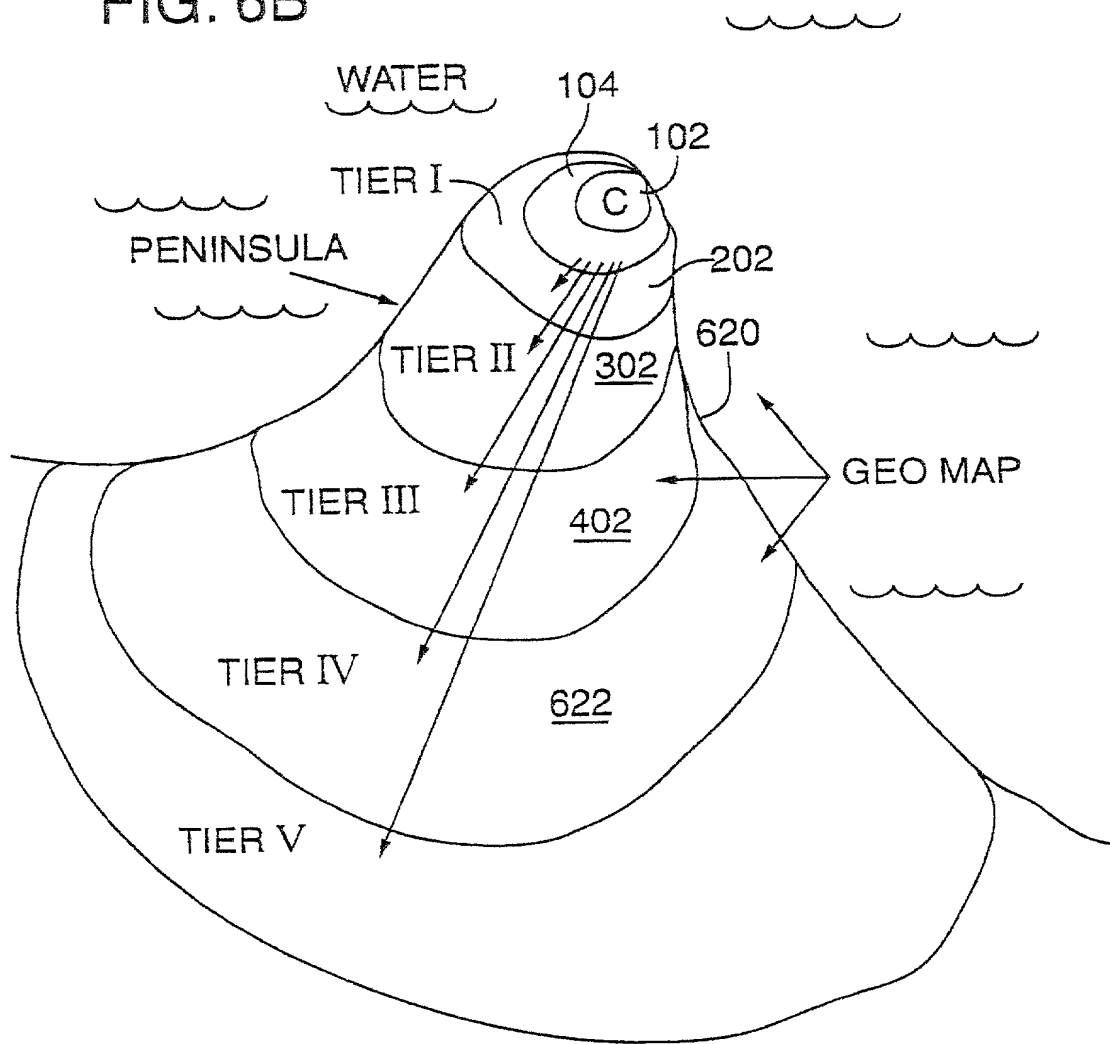
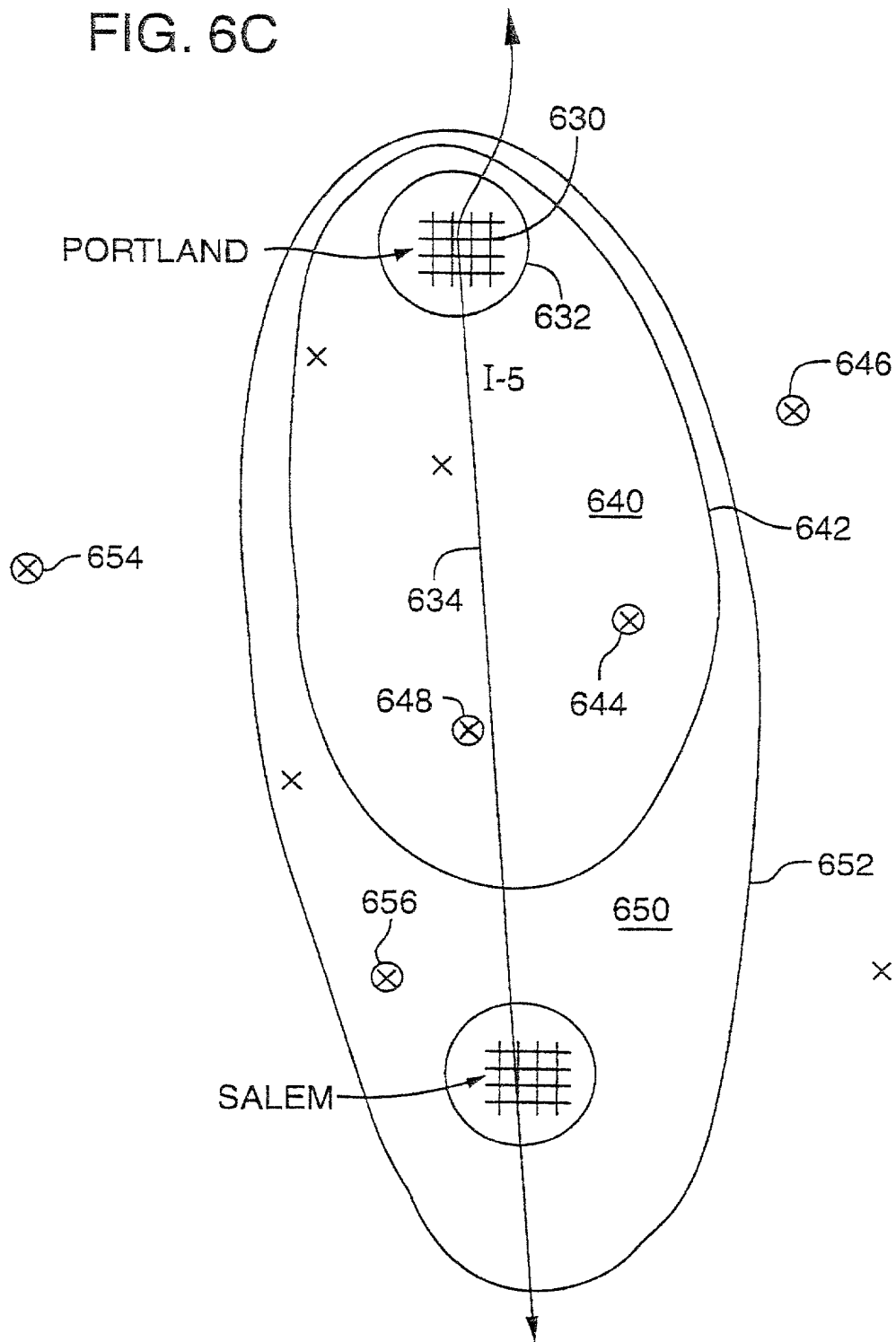
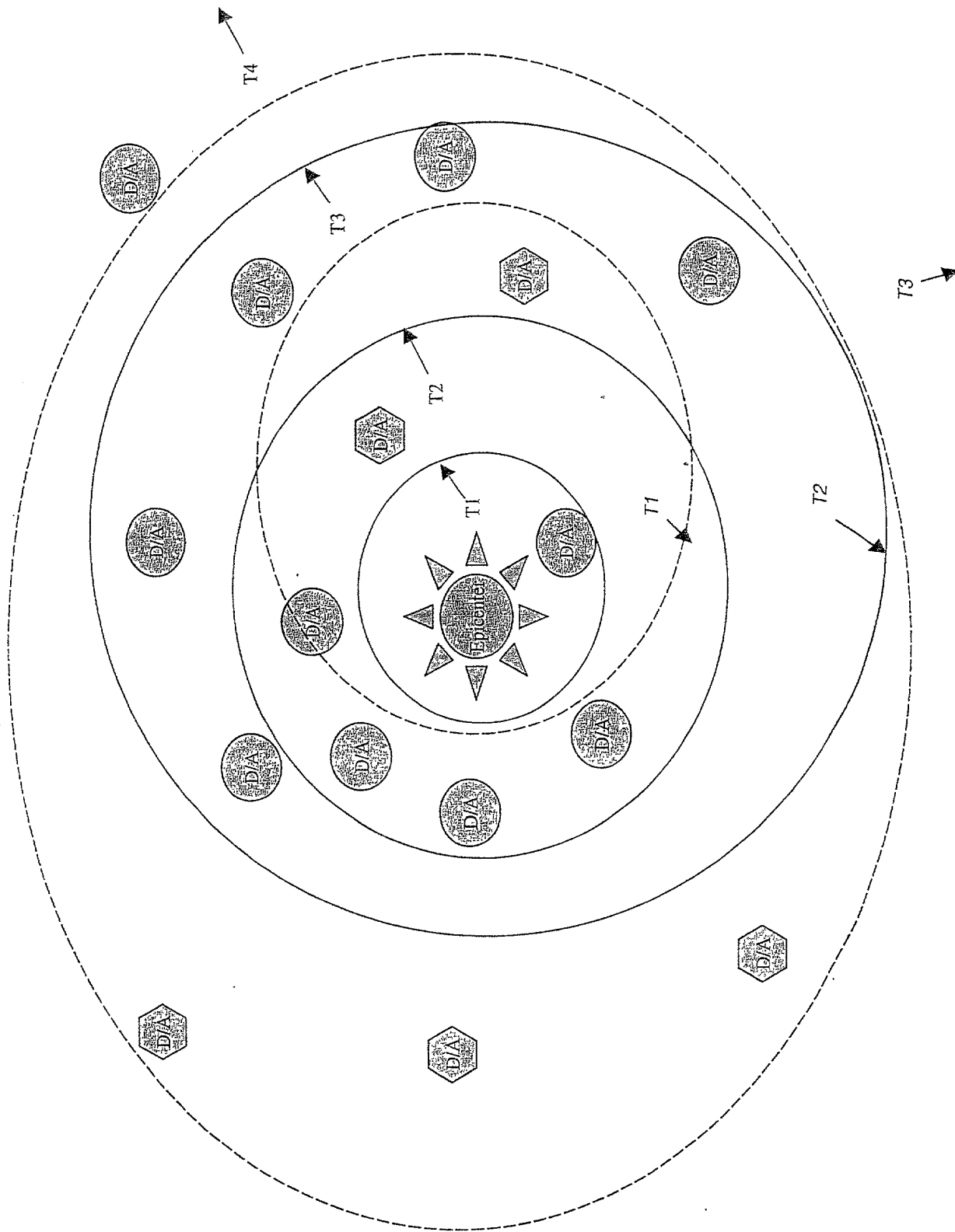


FIG. 6C



Business Density Tying





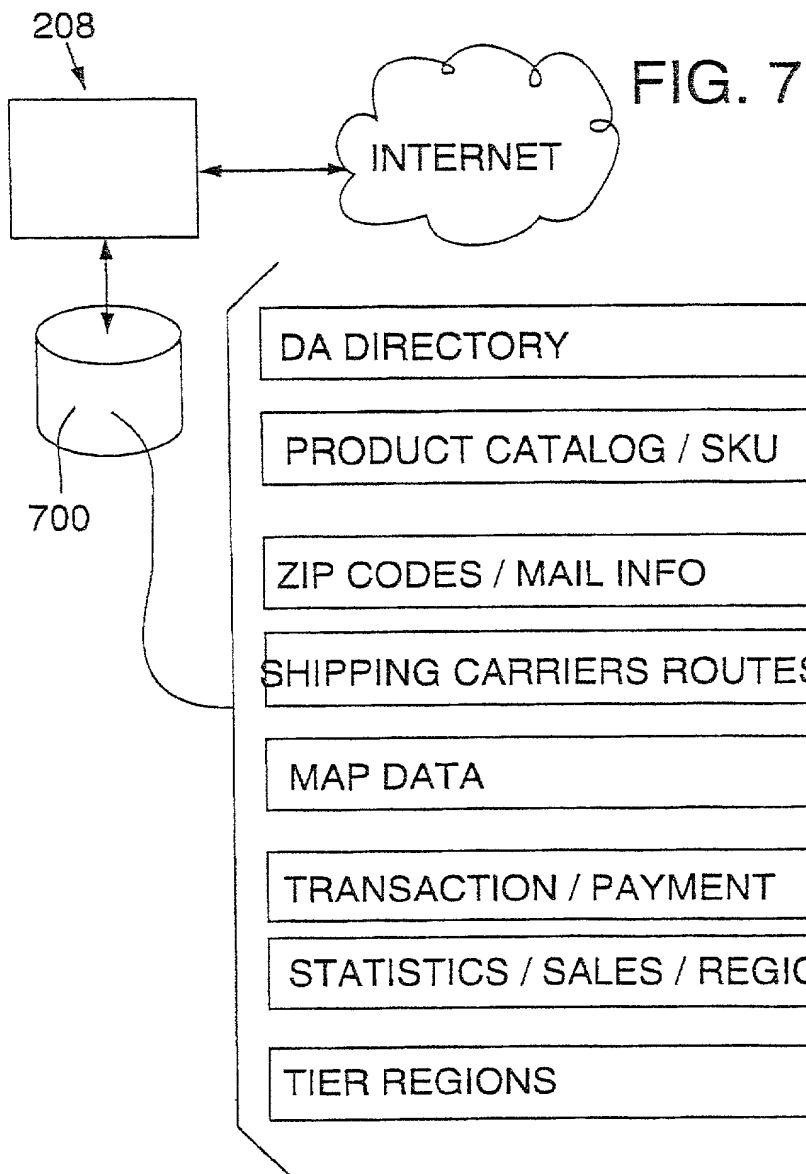
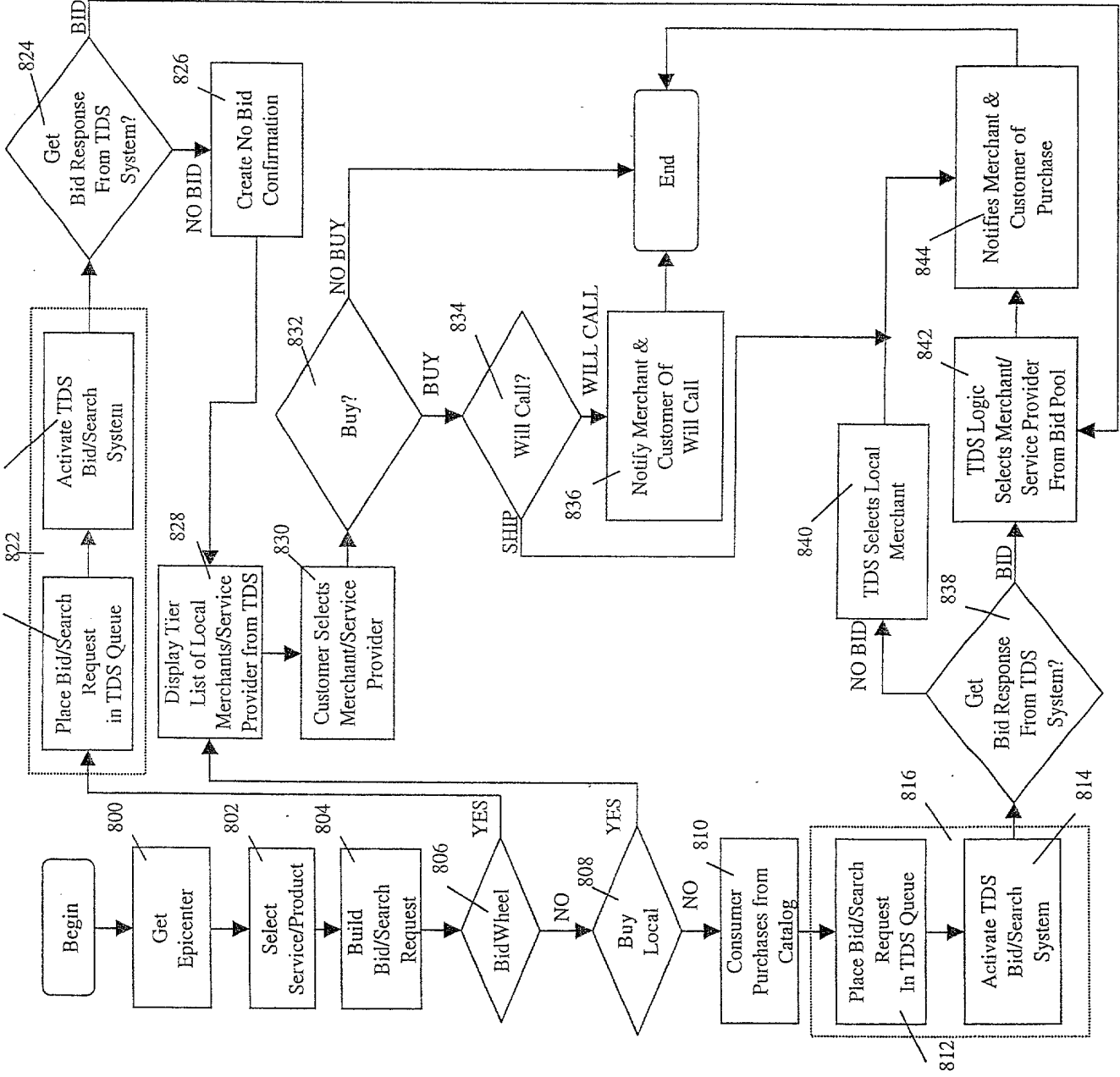
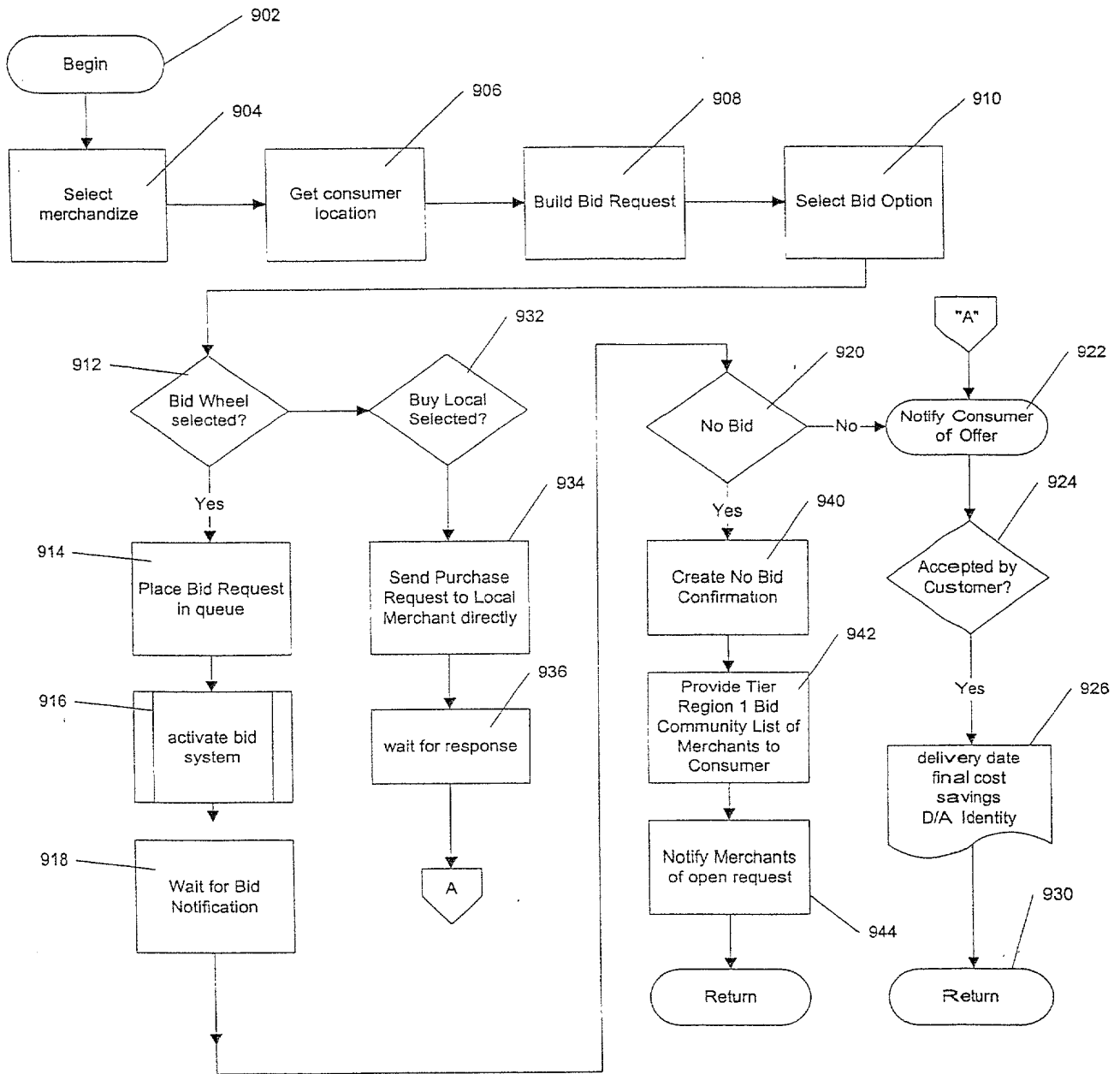


Figure 8 Method  
of E-Commerce Model

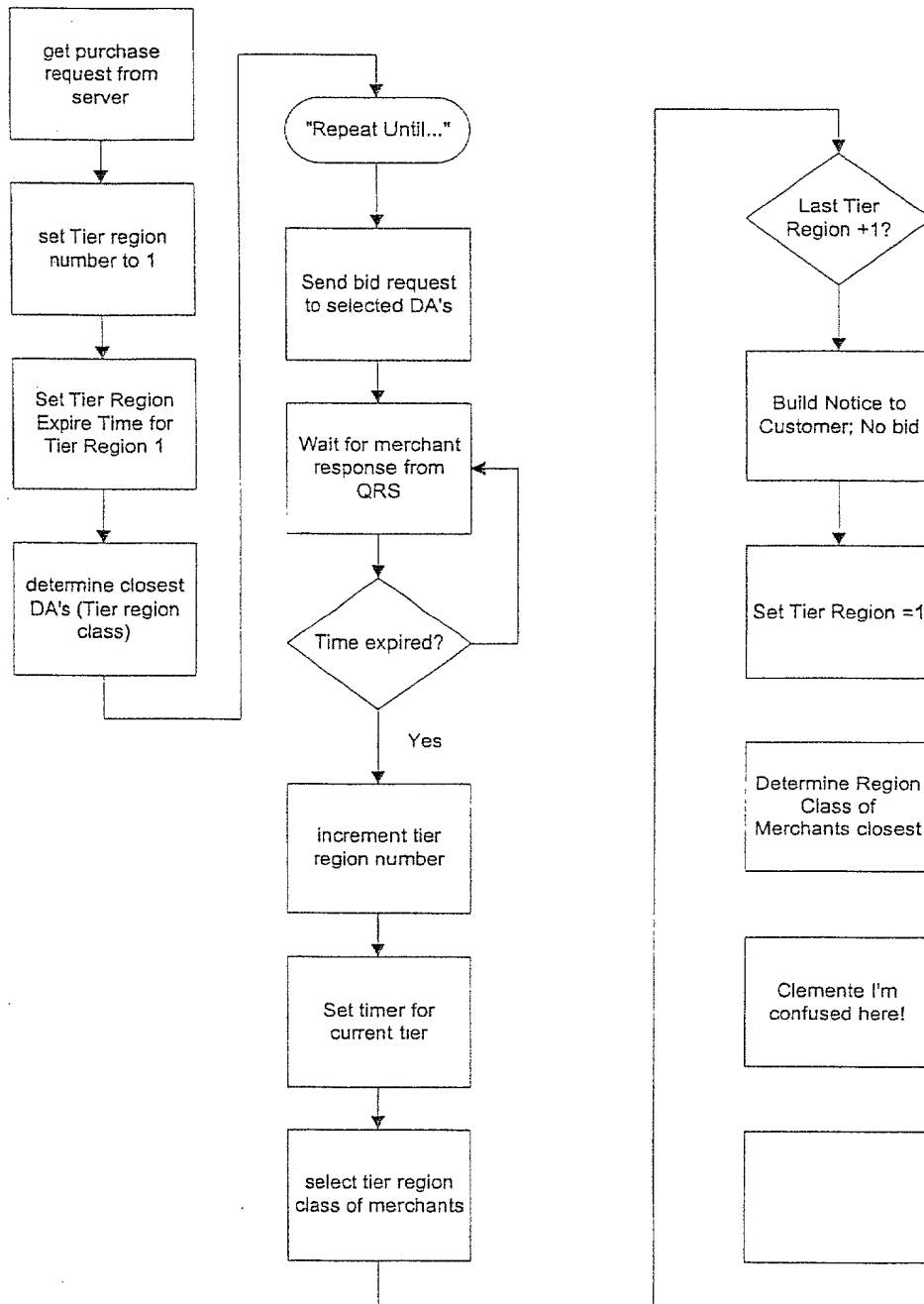


# FIGURE 9



## Bid Wheel (TDS) Logic

# FIGURE 10



## BID SYSTEM

## FIGURE 11A

### TDS Logic Engine

WHILE (Forever) DO  
    Begin  
  
    Select Merchandise (Merchandise\_Type) from Consumer  
    Get Region\_Id (Zip\_Code) from Consumer  
    Build Bid\_Request (Merchandise\_Type, Zip\_Code)  
    Select Bid\_Option (Retail\_Price, Bid\_Wheel)  
  
    IF Bid\_Wheel Selected THEN  
        Begin  
        Place Bid\_Request in SAA.com Bid\_System Queue (Response\_Time, Lowest\_Bid)  
        Activate Bid\_System™  
        Wait For Bid\_Notification  
        End  
    ELSE  
        Begin  
        Send Bid\_Request (Retail\_Price) to Local Merchant Directly  
        Wait For Bid\_Notification  
        End  
  
    IF No Order Bid THEN  
        Begin  
        Create No Order Bid Confirmation  
        Provide Tier Region 1 Bid Community List of Merchants for Consumer to contact  
        End  
  
    Notify Consumer Of Confirmation Of Order (Delivery Date, Final Cost, Savings, D/A\_Id)  
  
End

10004421-102301

## Bid System

## Bid System

```

Get Bid_Request from SAA.com Bid_System Queue (Response_Time, Lowest_Bid)
Set Bid_Request Tier_Region_Number to Tier_Region_1
Set Tier_Region_Expired_Time for Tier_Region
Determine_Tier_Region_Class of Merchants Closest to Consumer From Tier_Region_Data Base
  ( Tier_Region, Bid_Community )
REPEAT
  Begin
  Send Bid_Request For Quote/Bid To Tier_Region_Class of Merchants (Merchant_List)
  Wait For Merchant Response from Quick Response System™ OR Tier_Region_Expired_Time
  IF Tier_Region_Expired_Time THEN
    Increment Bid_Request Tier_Region_Number
    Set Tier_Region_Expired_Time for Next Tier_Region
    Determine_Tier_Region_Class of Merchants Closest to Consumer From Tier_Region_DataBase
      ( Tier_Region_Number, Bid_Community )
  End
UNTIL  (No_Confirmation_Received from D/A OR NOT Tier_Region_Expired_Time)
      AND (NOT (Last_Tier_Region + 1) DO

IF Last_Tier_Region + 1 THEN                                     /* No Bids Received */
  Begin
  Build Confirmation Notice of No Order Bid for Consumer
  Set Bid_Request Tier_Region_Number to Tier_Region_1
  Determine_Tier_Region_Class of Merchants Closest to Consumer From Tier_Region_Data Base
    ( Tier_Region, Bid_Community )
  Create Notify Message to Tier_Region 1 Merchants for Order Fulfillment
  Send Bid_Request For Quote/Bid To Tier_Region_Class of Merchants (Merchant_List)
  End

IF Merchant Response with Confirmation_Received THEN
  Build Confirmation Notice of Order for Consumer

```

FIGURE 11C

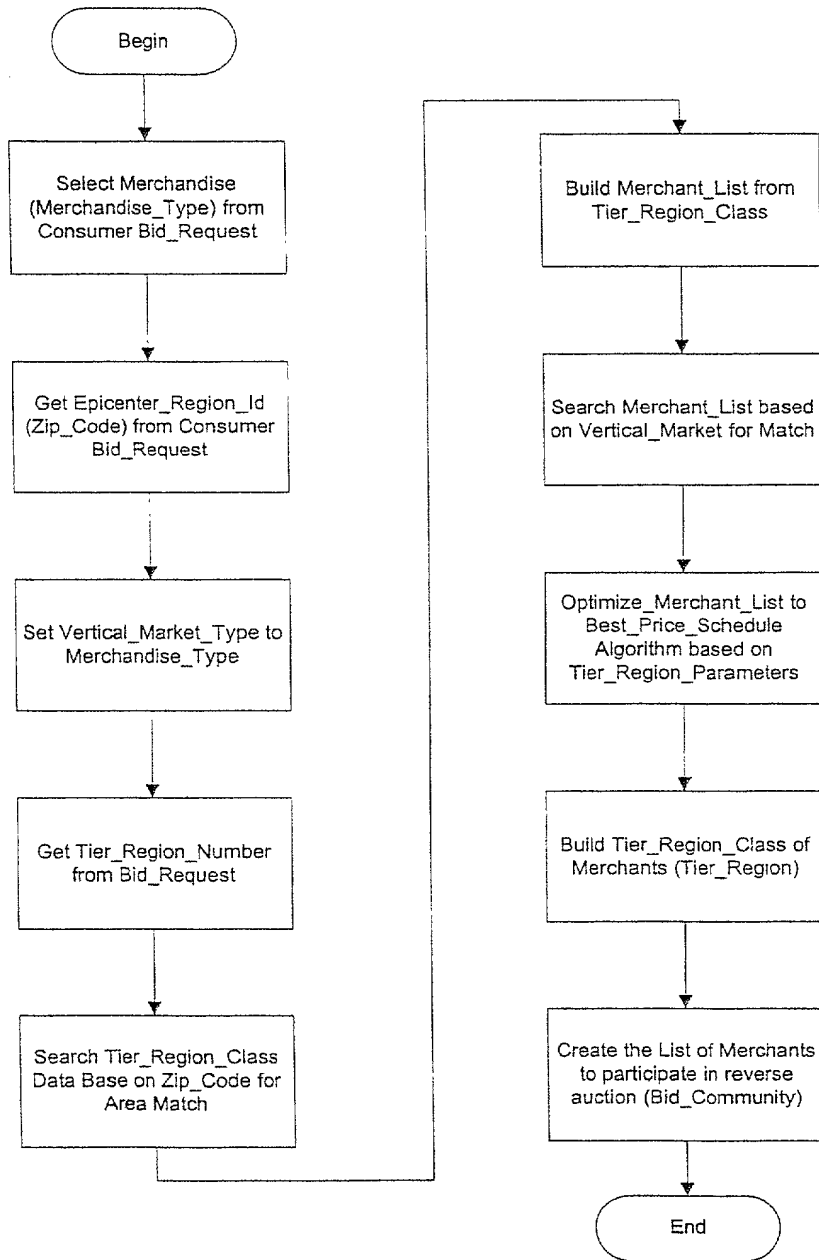
**Quick Response System™**

Wait for Next Response from Merchant  
Get Merchant\_Id (D/A\_Id)  
Validate\_Merchant\_Identifier  
Get Bid\_Response\_Form from Merchant Input (Bid\_Number, Product\_Code, Sell Price)  
Validate Bid Number, Product Code, Sell Price  
IF Lowest Price In Tier\_Region\_Class of Merchants Participating In Bid\_Number THEN  
    Begin  
        Close Out Reverse Auction Bidding on Bid\_Number Record  
        Notify Bid\_System of Merchant Confirmation Completed  
        Notify Tier\_Region\_Class of Merchants  
    End

**Create Tier Region**

Determine\_Tier\_Region\_Class of Merchants Closest to Consumer (Tier\_Region, Bid Community)  
  
Begin  
  
    Select Merchandise (Merchandise\_Type) from Consumer Bid\_Request  
    Get Epicenter\_Region\_Id (Zip\_Code) from Consumer Bid\_Request  
    Set Vertical\_Market\_Type to Merchandise\_Type  
    Get Tier\_Region\_Number from Bid\_Request  
    Search Tier\_Region\_Class Data Base on Zip\_Code for Area Match  
    Build Merchant\_List from Tier\_Region\_Class  
    Search Merchant\_List based on Vertical\_Market for Match  
    Optimize\_Merchant\_List to Best\_Price\_Schedule Algorithm based on Tier\_Region\_Parameters  
    Build Tier\_Region\_Class of Merchants (Tier\_Region)  
    Create the List of Merchants to participate in reverse auction (Bid\_Community)  
  
End

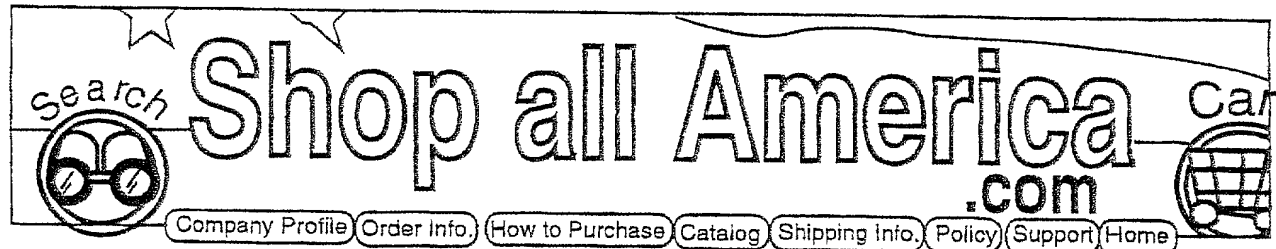
# FIGURE 12



## Create Tier Region



1302



Apparel  
Appliances  
Automotive  
Batteries  
Baby Items  
Bath Towels  
Beauty Supplies  
Beds & Mattresses  
Boats Register  
Books & Literature  
Boxes  
Bicycles  
Bridal & Tuxedo  
Cameras  
Candy  
Camper/RV  
Carpets & Rugs  
Cell Phones  
Collectibles  
Computers  
Electronics  
Draperies  
Fabrics  
Farm & Feed  
Food & Gourmet  
Flowers  
Furniture  
Games  
Greeting Cards  
Hardware  
Healthcare  
Home & Garden  
Housewares  
Jewelry  
Lighting Fixtures  
Lumber Yard  
Music & Videos  
Motorcycles  
Office Supplies  
Paint Supplies  
Party Supplies  
Pet Supplies  
Pharmacy  
Sporting Goods  
Toys

Product Search

Go Shopping

Welcome to a nationwide team of businesses committed to bringing you the best product, service and support available over the Internet! Click here to learn more about us.

Click Here  
To Learn More  
About Us!

1322

24 Hour Live Operator!

Click for live assistance.

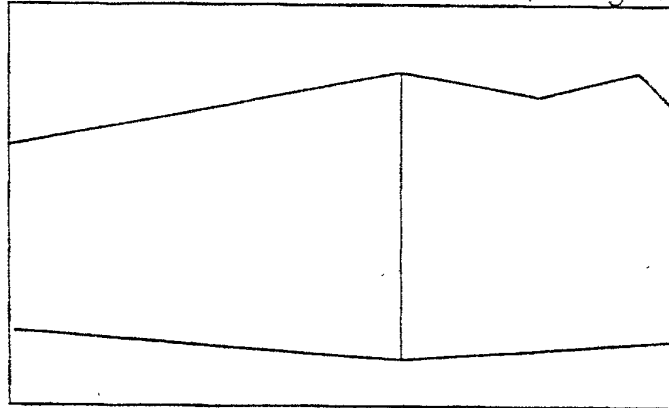
May I help you?

1304

1310

ShopallAmerica.com  
STORE LOCATOR

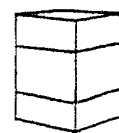
Featured Store: Hazen Hardware, Oregon



Hazen Hardware is a 2nd generation family business owner by Bob and Terry Smith. With over 40 years of

Today's In-Stock Inventory Value:  
\$782,614,225

Featured Items:



Star War  
Box Set  
VHS,  
\$59.95

1312



Find Stor  
Callaway  
golf set.  
\$1,299.9  
irons, 3  
woods,  
putter an  
bag.

Find Stor



Online  
Investing  
Beginner  
guide -  
\$14.95



Find Stor  
Nintendo  
Game bo  
and  
Accessor  
\$98.95



Find Stor  
Digital Vi  
Cam. \$5



Find Stor  
High  
Resolutio  
Color Pri  
-Mac or

http://www.xxxxxxxx.com/shop/

FIG. 13

10004421-102001

## ... PRODUCT TYPE GARDENING

### TOOLS

- ☐ Shovel, long
- ☐ Shovel, short
- ☐ Shovel, square
- ☐ Trowel, basic
- ☒ Trowel, deluxe
- ☐ Wheelbarrow

### PLANTS

- ☐ Spathephylum
- ☐ Venix
- ☐ Biscus
- ☐ Bicuspid, red
- ☐ Chrysanthemum
- ☐ Hydrangea

☒ BUY LOCAL    ☐ BIDWHEEL    ☒ SUBMIT

SKU  
PIC  
MSRP  
DESC

Home

New  
Type

Cart

Search

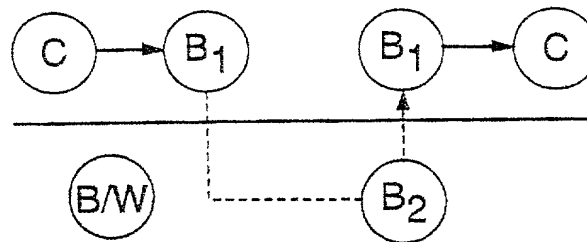
Customer  
Service

FIG. 14

FIG. 15A

SUBTERRANEAN:

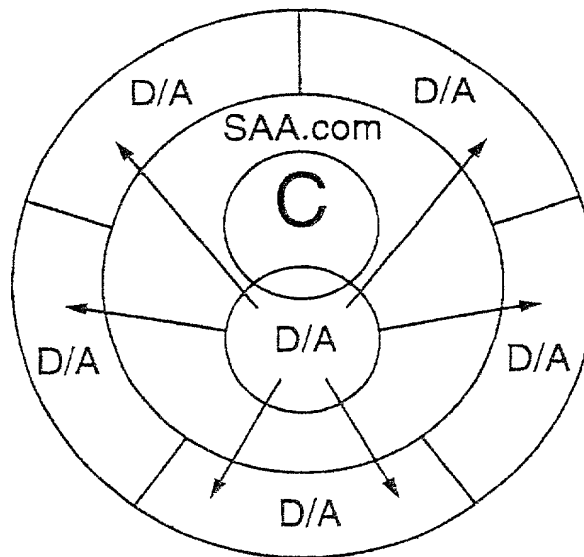
LOCAL



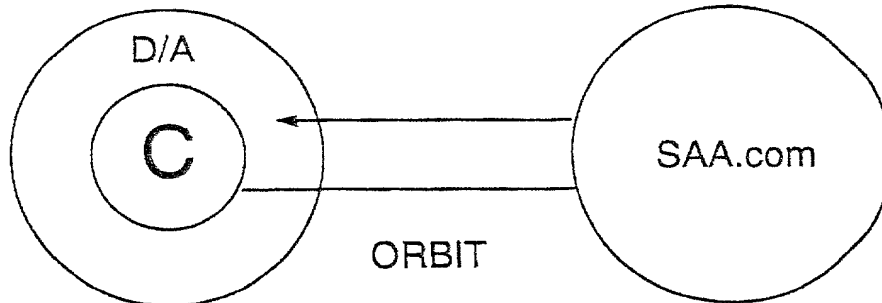
WHOLESALE

FIG. 15B

BUY LOCAL / DABN



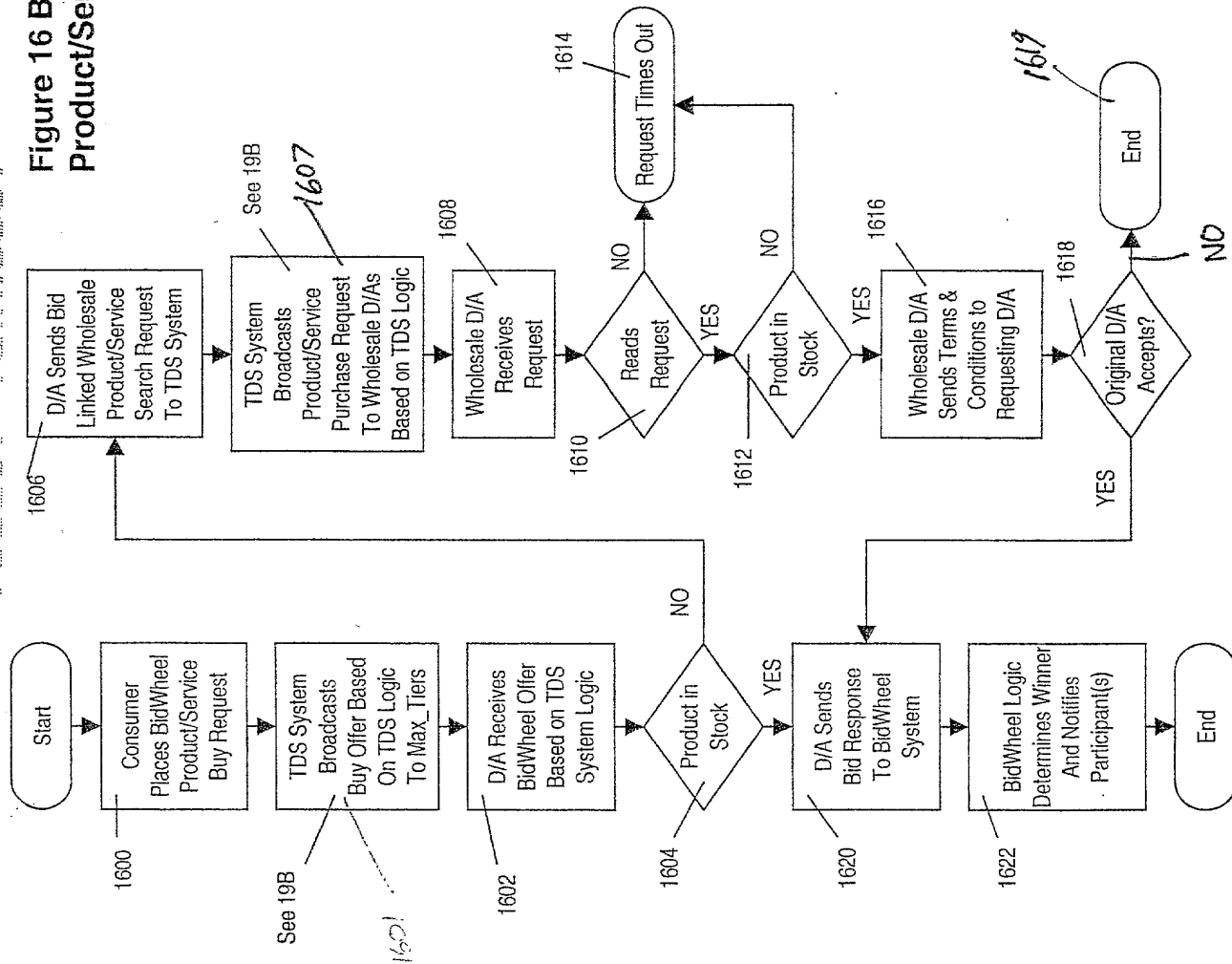
Bidorbit.com



ORBIT

100044241 102301

Figure 16 B2B Subterranean Wholesale TDS Product/Service Search



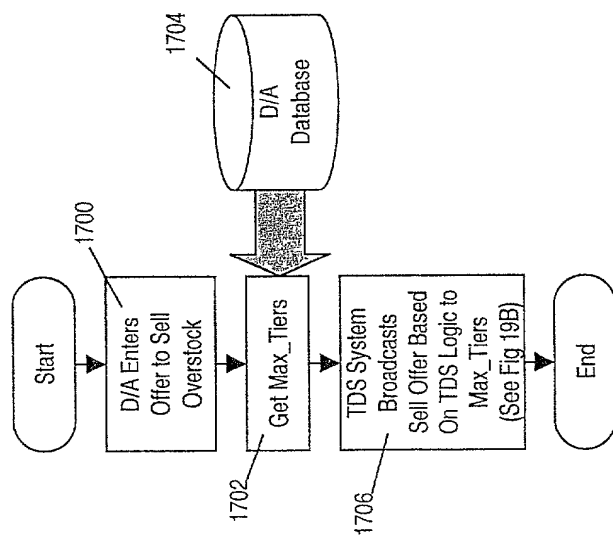
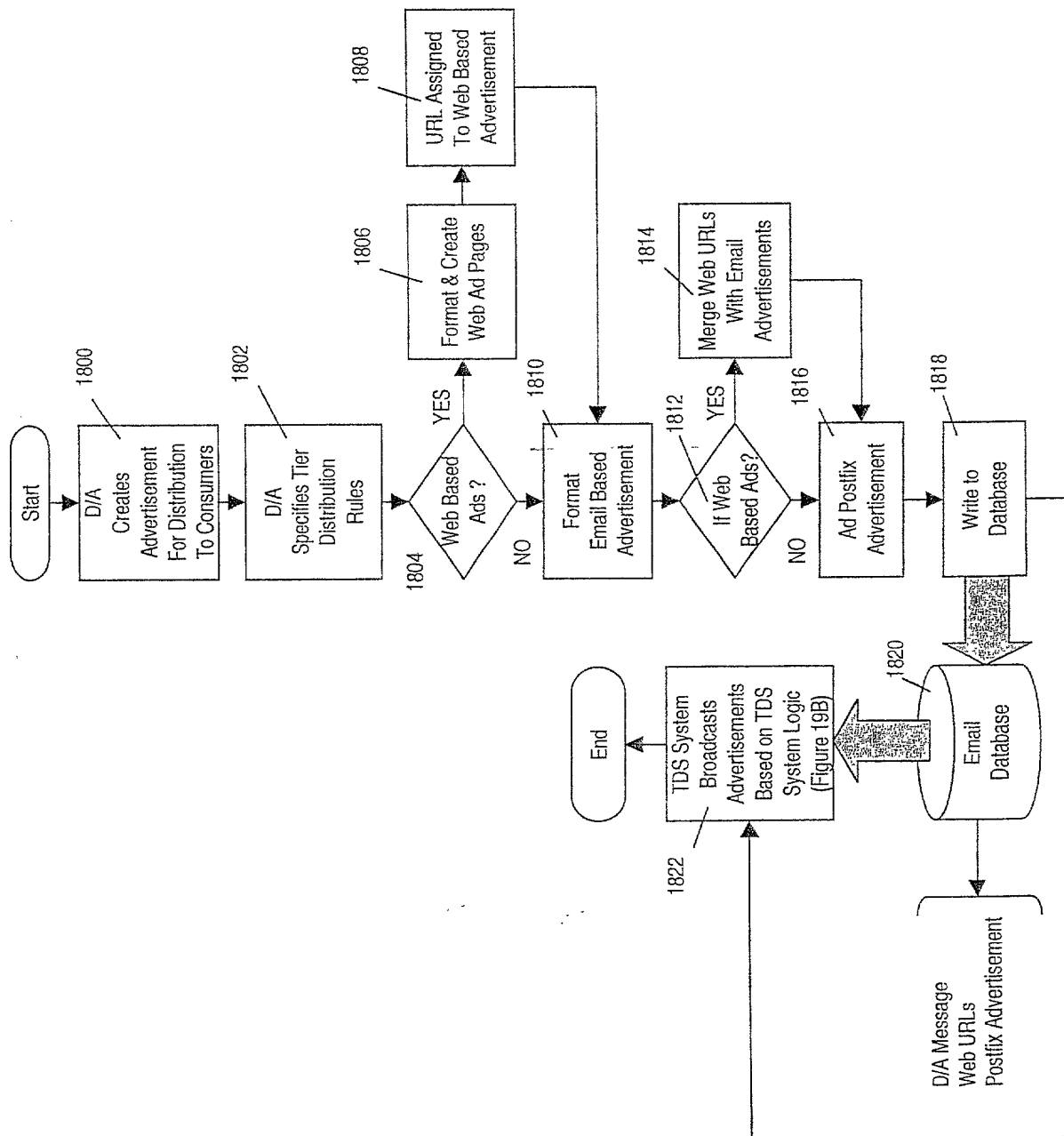


Fig 17 TDS Vertical Net Broadcast Network (B2B)



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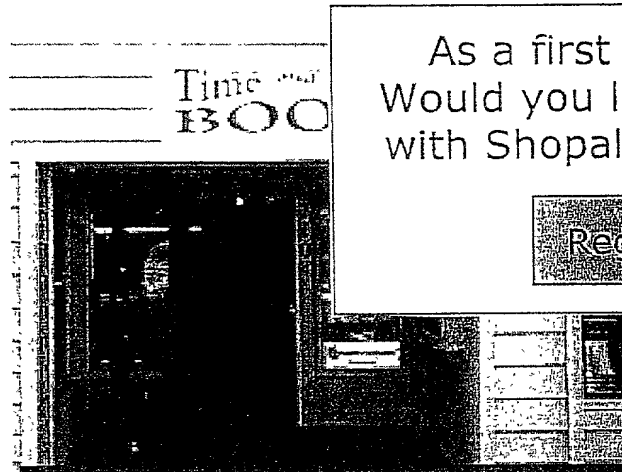
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## Time and Again Books



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Specializing in the buying and selling of quality antiques, collectibles, fine furniture and books, we are located off scenic Route 99W on the way to the Oregon Coast. Tourists and locals love to browse our wide selection of antique radios, clocks, Depression glass, Native American artifacts, and all types of antique American and European fine furniture. We also sell new books in addition to our rare and antique collection.

### Forms of Payment Accepted:

Cash, Personal Check, Visa, Mastercard, Discover

*Please stop in for details on our book exchange program!*

### Store Hours

|           |        |
|-----------|--------|
| Monday    | closed |
| Tuesday   | 10-5   |
| Wednesday | 10-5   |
| Thursday  | 10-5   |
| Friday    | 10-5   |
| Saturday  | 10-5   |
| Sunday    | closed |

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ShopallAmerica Merchant Mailer Consumer Opt-In

Enter your address

Address: 19163 SW Murphy Ct

Zip Code: 97007

Indicate Areas of Interest by Vertical Market

Automotive



Food & Gourmet



Sporting Goods



Indicate merchants that you wish to receive mailings from:

Joe's Deli & Gourmet Foods



Safeway Grocery Stores



True Value Hardware



Fig. 18B





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## Weekly Specials for Sept 4 – Sept 10, 2000

### Time and Again Books

Goblet of Fire (Book 4) Harry Potter List \$24.95 Our Price \$12.95

Harry Potter and Goblet of Fire Our Price \$33.95

Cassette Unabridged by J.K Rowling List \$39.95

The Bear and the Dragon Tom Clancy Our Price \$24.95

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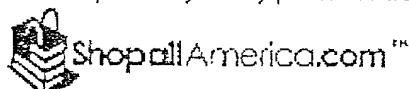


Fig. 18C

ShopallAmerica.com merchant mailer

Hello Jamie,

You indicated an interest in books and gourmet food when you signed up as a consumer member of ShopallAmerica.com  
Following are the local specials from merchants in your community that you have indicated interest in

**Time and Again Books**

Goblet of Fire (Book 4) Harry Potter List \$24.95 Our Price \$12.95

Harry Potter and Goblet of Fire Our Price \$33.95

Cassette Unabridged by J.K Rowling List \$39.95

The Bear and the Dragon Tom Clancy Our Price \$24.95

<<< Please stop in for details of out book exchange program >>>

**Joe's Deli**

50 year old Balsamic Vinegar \$149.97

Corn Beef per pound \$4.97

Pastrami \$5.97

Cole Slaw \$2.99

<<< Bring this ad in for \$1.00/lb off any deli meat >>>

**ShopallAmerica.com your home town shopper**

FIG. 18D

PLEASE PRINT "T244000T"  
Welcome Joe's Deli Please enter your weekly specials

Enter up to 4 specials. Each special can be described by an eighty  
Character definition with a price:

|                              |          |
|------------------------------|----------|
| 50 year old Balsamic Vinegar | \$149.97 |
| Corn Beef per pound          | \$4.97   |
| Pastrami per pound           | \$5.97   |
| Cole Slaw per pint           | \$2.99   |

Post to Web Site ☐

Merchant Mail to Consumers ☐

FIG. 18E



Send the weekly specials to: Select one

|  |                          | # Sent  |
|--|--------------------------|---------|
| Home Market                                      | <input type="checkbox"/> | 500     |
| Local consumers outside of your home market      | <input type="checkbox"/> | 2,500   |
| State wide                                       | <input type="checkbox"/> | 10,000  |
| National   | <input type="checkbox"/> | 100,000 |
| North America (includes Alaska, Hawaii & Canada) | <input type="checkbox"/> | 120,000 |

Enter date to send      XX / XX / XXXX

As a silver member of the ShopallAmerica.com merchant program you may make one mailing a week. If you would like to make more than one mailing a week please call ShopallAmerica.com at...

FIG. 18 F



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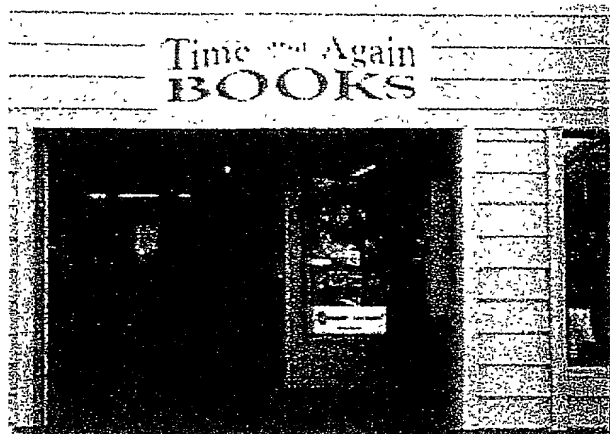
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## Time and Again Books



710 E. First Street  
Newberg, OR 97132  
Phone: (503) 538-3443  
Fax: (503) 538-3443

**Owners:**  
Tom & Lissa Radomski

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antiques, collectible  
located off scenic f  
Oregon Coast. Tour  
wide selection of a  
glass, Native Ameri  
antique American a  
sell new books in a  
collection

Buy 5 books  
Get the 6<sup>th</sup> one FREE

[Print Coupon](#)

**Forms of Payment Accepted:**  
Cash, Personal Check, Visa, Mastercard, Discover

*Please stop in for details on our book exchange  
program!*

|          |        |
|----------|--------|
|          | closed |
|          | 10-5   |
|          | 10-5   |
|          | 10-5   |
|          | 10-5   |
| Saturday | 10-5   |
| Sunday   | closed |

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FIG. 18 G

FIG. 18H

**Buy 5 Books**  
**Get the 6th one FREE**

Time and Again Books

Expires 9/30/00

ShopallAmerica.com Merchant Coupon

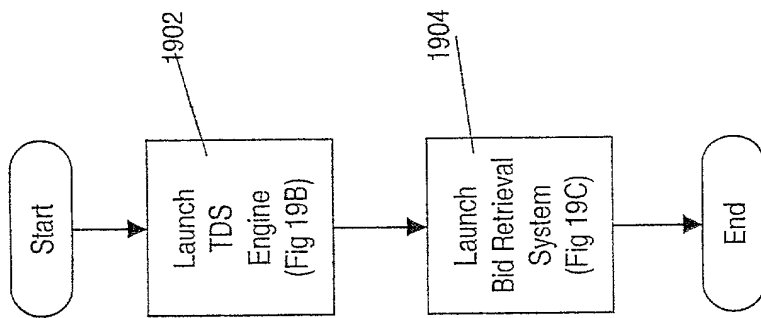
## Merchant Coupon Distribution Rules Entry Page

- Offer to everyone that visits my site ☐
- Offer only to those that have indicated interest in my vertical field. ☐
- Offer only to those that have indicated no interest in my vertical field ☐
- Offer only to consumers in my home tier ☐
- Offer only to local consumers outside of my home tier but within my local area. ☐
- Offer only in my home state ☐
- Offer to anyone ☐

Fig. 181



Fig 19A Tier Engine





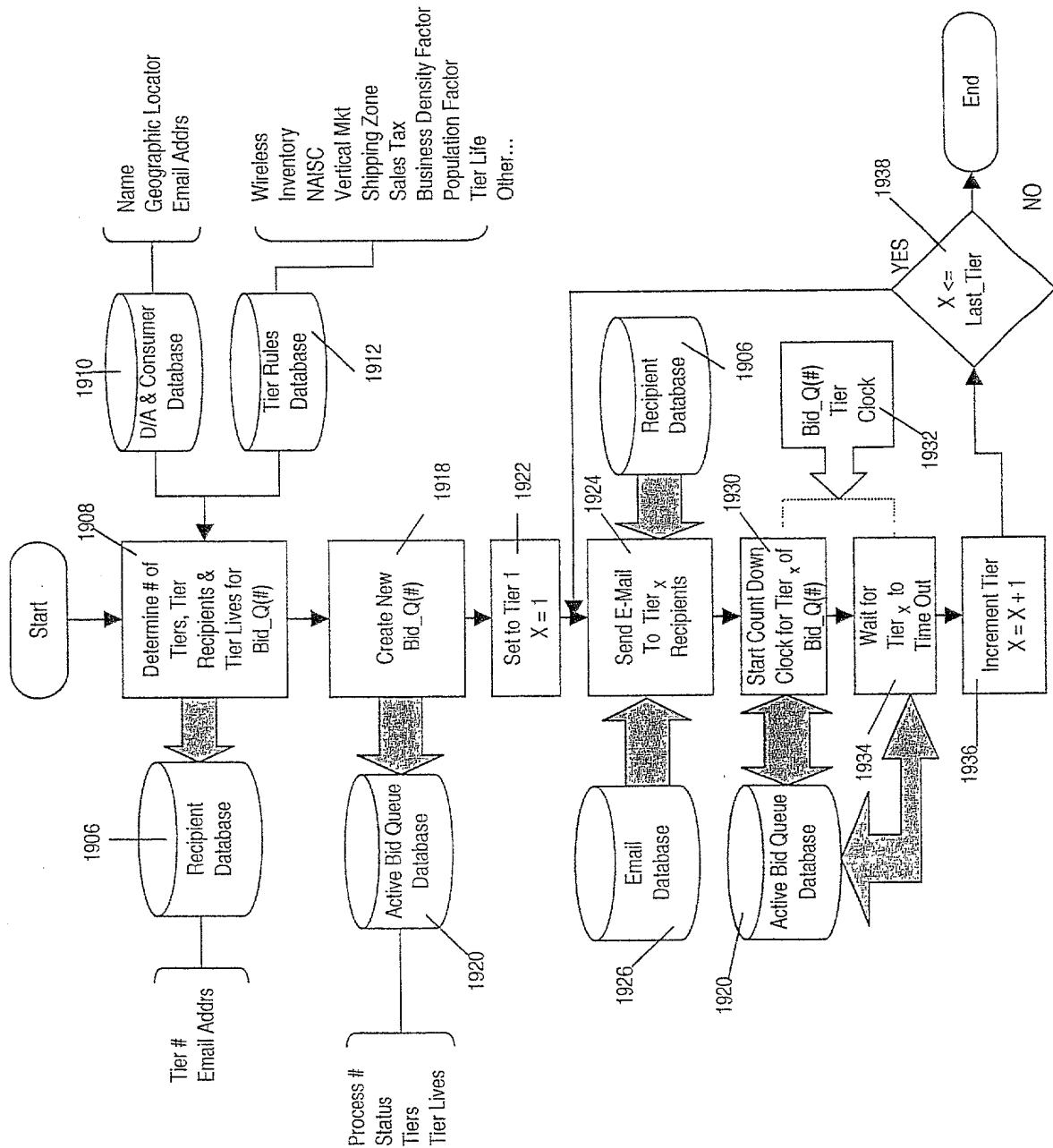


Fig 19B

Tier Engine – Tier Creation & Distribution

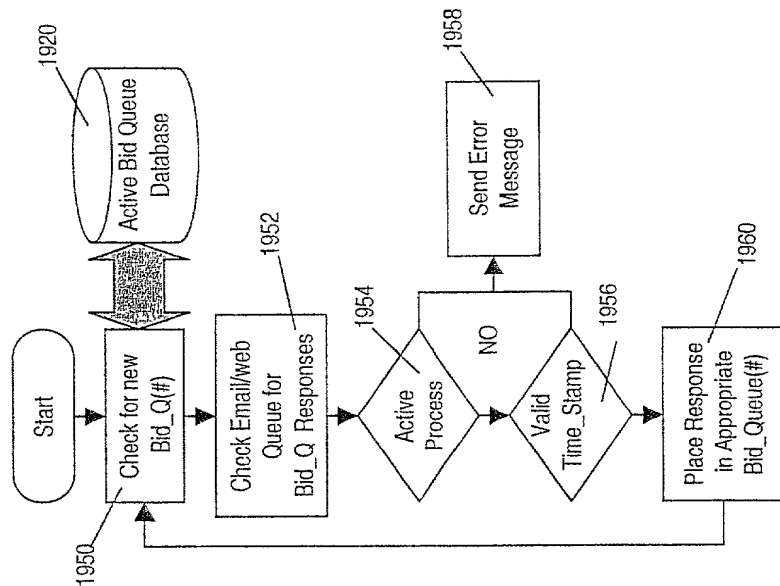


Fig 19C

Tier Engine -- Bid\_Retrieval

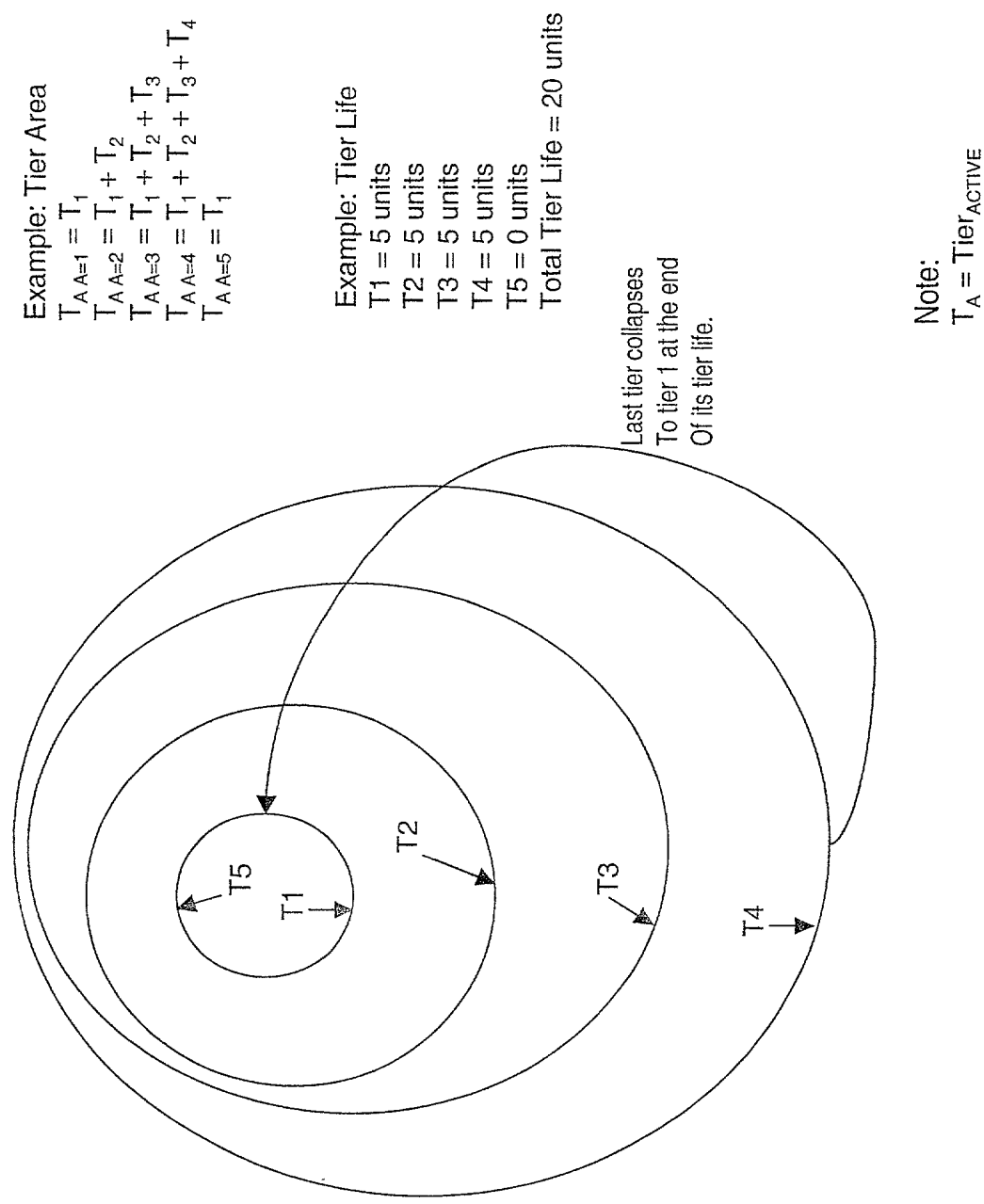
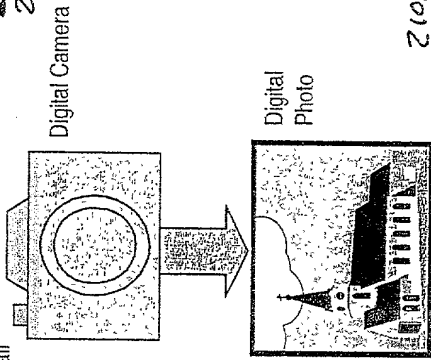


FIG. 20

Problem: Current web development requires that the prospective small business owner either pay for a custom designed Website or create their own site using either PC or web based tools. These methods are costly and confusing to the average small business owner. Using an automated system that requires only a photo and basic information about the business this system will dynamically create an entry in the Visual Net Directory with a hyperlink to the merchant website in real-time allowing an on-site salesperson to create the website for that business at one meeting, in real-time, at a very low price.

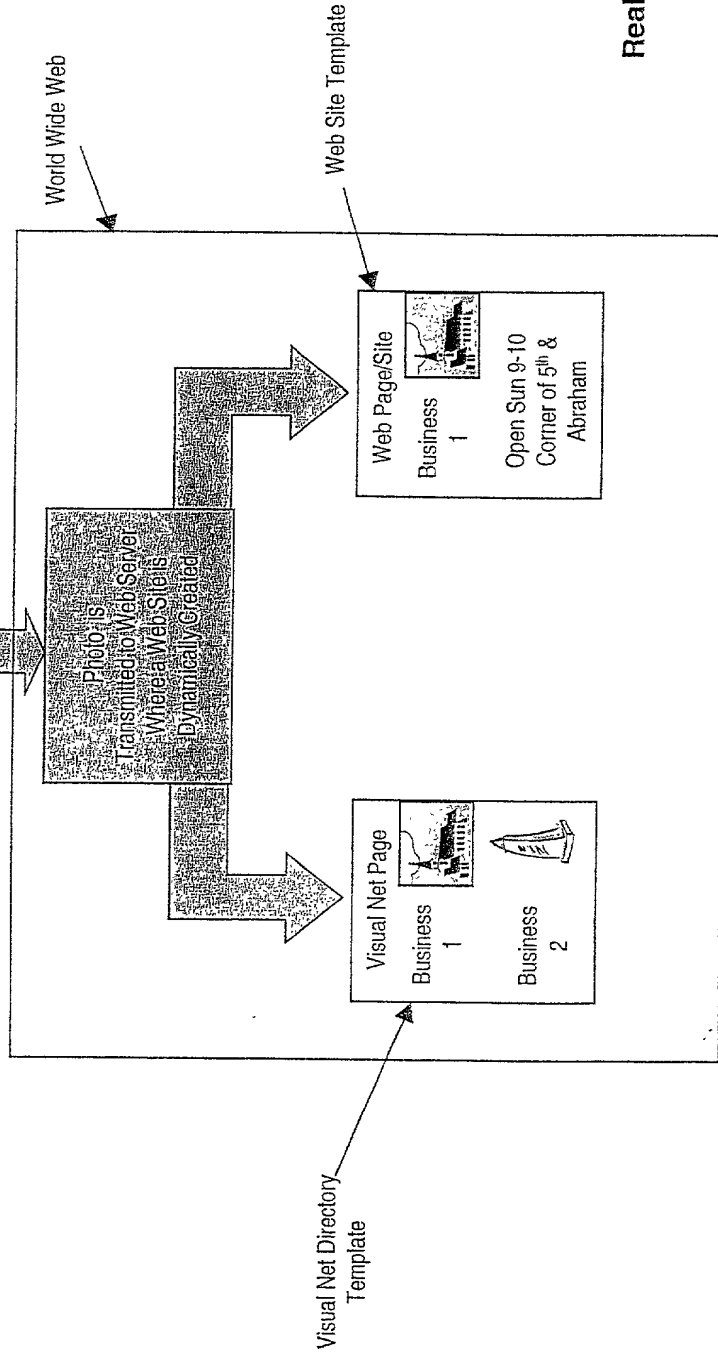
## Visual Net Directory

- Step 1: Salesperson takes photo of business
- Step 2: Salesperson gets GPS location on laptop
- Step 3: Salesperson transfers photo from digital camera to laptop
- Step 4: Salesperson transfers photo & business data to the TDS system via wireless apparatus, land based telco line, etc.



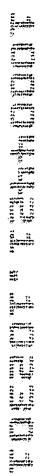
Visual Net Page Directory and merchant web site are created dynamically and in real time by a server process using predefined templates to create a uniform look and feel for the website. The business address is converted into a centroid such as a geocode, longitude & latitude, etc for use by the TDS in determining economic tiering.

- Step 5: The salesperson shows the completed website and the Merchants entry into the Visual Net Directory.



## Real Time Presence Model

Fig. 21

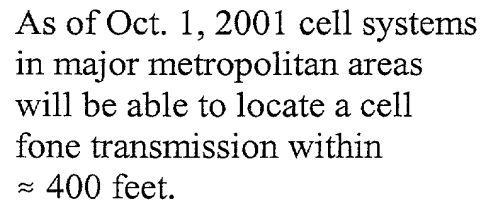
[illegible]

Tiering could be used as a sale stool – the merchant would automatically get a listing if the consumer was located in the home tier of the retailer. The retailer could pay to extend their home tier.

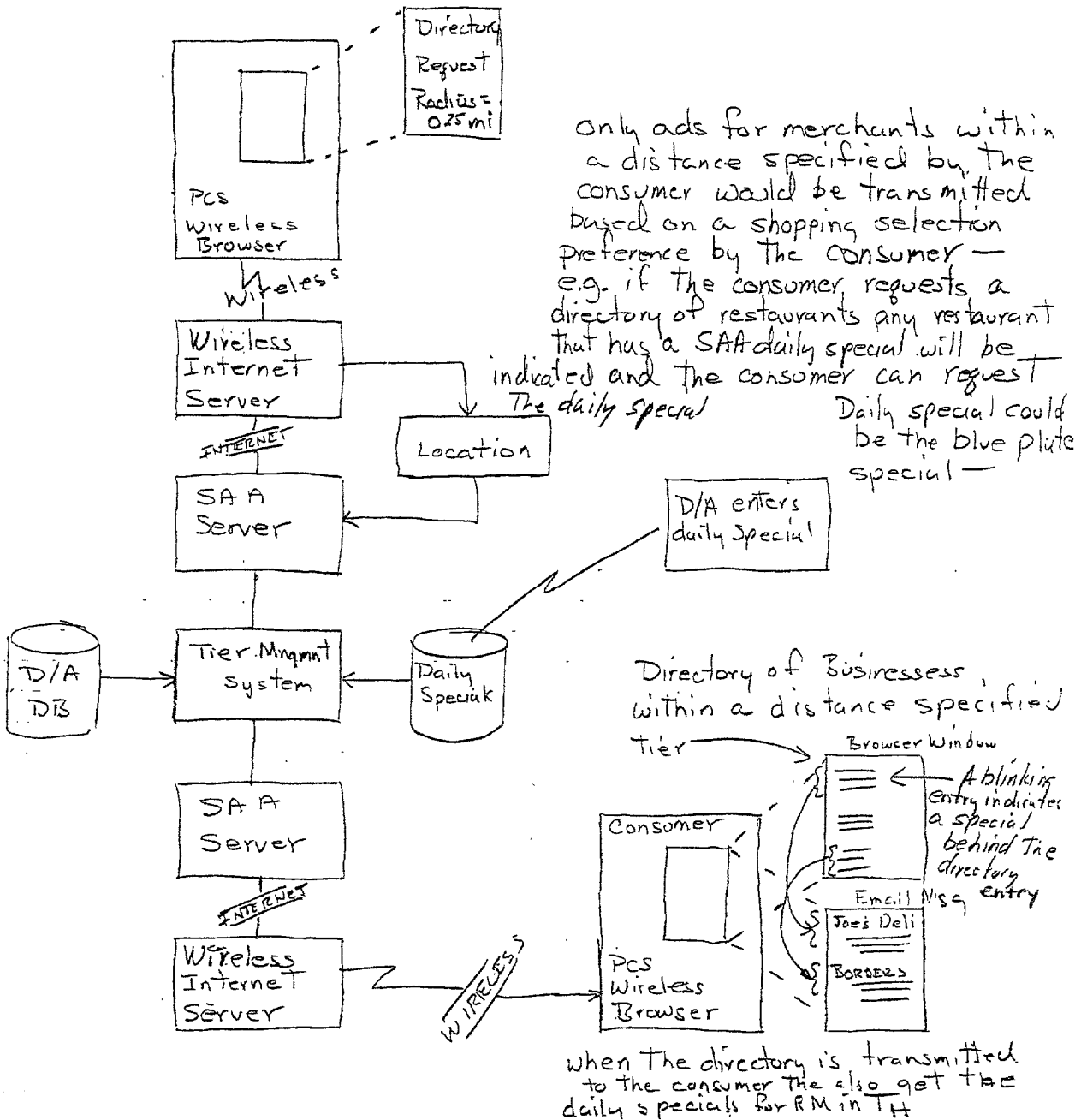
The tiering could be used to increase the attraction of the offer, *e.g.*, in the home tier the office might be for 5% off, but in an extended tier ( $T_{H+X}$ ) the offer could be 10% off.

### Tier Moves With User

| Variable             | Mean  | Standard Deviation | Minimum | Maximum |
|----------------------|-------|--------------------|---------|---------|
| Age                  | 34.5  | 10.2               | 22      | 55      |
| Gender               | 0.5   | 0.5                | 0       | 1       |
| Marital Status       | 0.6   | 0.5                | 0       | 1       |
| Education            | 12.5  | 1.5                | 10      | 16      |
| Income               | 25000 | 15000              | 10000   | 50000   |
| Health               | 0.8   | 0.2                | 0       | 1       |
| Smoking              | 0.3   | 0.5                | 0       | 1       |
| Alcohol              | 0.2   | 0.4                | 0       | 1       |
| Exercise             | 0.4   | 0.5                | 0       | 1       |
| Stress               | 0.6   | 0.5                | 0       | 1       |
| Depression           | 0.3   | 0.5                | 0       | 1       |
| Loneliness           | 0.4   | 0.5                | 0       | 1       |
| Life Satisfaction    | 0.7   | 0.3                | 0       | 1       |
| Quality of Life      | 0.8   | 0.2                | 0       | 1       |
| Overall Health       | 0.9   | 0.1                | 0       | 1       |
| Physical Health      | 0.9   | 0.1                | 0       | 1       |
| Mental Health        | 0.8   | 0.2                | 0       | 1       |
| Social Health        | 0.7   | 0.3                | 0       | 1       |
| Emotional Health     | 0.6   | 0.4                | 0       | 1       |
| Behavioral Health    | 0.5   | 0.5                | 0       | 1       |
| Environmental Health | 0.4   | 0.5                | 0       | 1       |
| Occupational Health  | 0.3   | 0.5                | 0       | 1       |
| Financial Health     | 0.2   | 0.4                | 0       | 1       |
| Family Health        | 0.1   | 0.3                | 0       | 1       |
| Community Health     | 0.0   | 0.2                | 0       | 1       |
| National Health      | 0.0   | 0.1                | 0       | 1       |
| Global Health        | 0.0   | 0.0                | 0       | 1       |



# Figure 22D



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